

LEVASIL® Properties

LEVASIL® products are aqueous colloidal solutions of amorphous silica (SiO_2). The silica particles are discrete spheres which are not crosslinked with one another. They are hydroxylated on the surface and their average particle size is between approx. 5 and 140 nm (colloidal range) depending on the grade. LEVASIL products are homogeneous, low-viscosity liquids which do not separate into their individual components. They are milky white, opalescent or slightly turbid, depending on the grade.



The manufacturer of Bayer colloidal silicas takes place in an aqueous medium containing no organic solvent by means of particle growth processes from molecularly dissolved silica. Surface-active auxiliaries are not used. Bayer's decades of experience in manufacturing and using these colloidal solutions has resulted in its production facilities and services being certified according to DIN ISO 9001.

Behaviour towards added electrolytes

LEVASIL grades are sensitive towards electrolytes. To effectively prevent gelation, additions of electrolytes must be carried out carefully. The gelation speed and the strength of the resulting gel depend on the grade, concentration and type of electrolyte. The increase in viscosity which accompanies gelation begins once an incubation period has elapsed.

Behaviour towards additives

The anionic LEVASIL grades used in semiconductor polishing are compatible with a large number of commercial surfactants, plasticizers and antifoams, provided these are anionic or not ionic.

If you would like more information about HC Starck's LEVASIL products, please e-mail jill.simpson.b@bayer.com.

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